DEMOLITON PLAN

JORGENSEN FORGE EARLY ACTION AREA

Jorgensen Forge Corporation Property
Seattle, WA

Prepared for:

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1.0 Purpose & Objective

The purpose and objective of the Demolition Plan is to provide details on worker safety, protection of the public, work sequence and schedule, protection of the environment, material identification, and containment boom details. The activities covered under this plan are the chain link fence removal, stormwater outfall cutting and grouting, removal of shoreline bank debris, pile removal, and debris sizing/loading.

2.0 Worker Safety

Pacific Pile & Marine (PPM) has prepared and will implement a Site-Specific Health and Safety Plan (HASP) in accordance with Code of Federal Regulations (CFR) Title 29 Section 1910.120, and all other applicable laws and regulations. The Site-Specific HASP is included as separate appendix in the RAWP.

All personnel on site will don the required personal protective equipment (PPE), which consists of, at a minimum, laced steel-toed boots, safety vest, safety glasses, hardhat, and gloves. Additional PPE may be worn for project-specific tasks and associated hazards related to demolition.

During sizing operations with the hydraulic hammer attachment or the shearers, ground personnel will be a safe distance from operations to prevent contact from flying debris.

A tailgate safety meeting and stretch-and-flex will be performed at the start of each work shift and will include all employees and subcontractors on-site.

3.0 Protection of the Public

PPM will establish a Site Zone layout, which will include a clear delineation of the work areas including the Contractor Staging Area & Support Zone in accordance with the HASP. The existing Site security fencing around the Shoreline work area will be supplemented with temporary security fence panels as shown on Contract Design Drawings, Sheet G-4 to control and delineate the active work area and keep the public from entering the work area. Due to the shoreline configuration and lack of docks at Jorgensen Forge, access from water would be difficult however “No Trespassing” signs will be posted.

Truck drivers will be required to stay in their cab during debris loading operations. All tarping shall be performed outside of PPM’s work zone and any requests for checking trailer load gauges during loading will be performed by PPM personnel or work will be halted while a truck driver exits their truck to checks gauges.

4.0 Work Sequence and Schedule

4.1 Schedule

PPM has scheduled 7 workdays for demolition activities. Work will be performed on a 6-day workweek schedule (Monday through Saturday), with 10-hour workdays.

4.2 Sequencing

The following is the expected sequencing of demolition activities. While the sequencing of demolition activities may change due to varying conditions, this is the current expected order of operations.

1. Prior to beginning any demolition or ground intrusive activities, PPM will request utility locates from The Utilities Underground Location Center (One-Call utility locating service). Additionally, PPM will consult any facility drawings and contract a third-party independent utility locator to check for buried utilities. PPM will survey and record locations of utilities that are in close proximity to areas that may be disturbed at a future date.

2. Before demolition begins, the temporary security fencing is required to establish the work zone will be installed. Also a Site Storm Water Pollution Prevention Plan (SWPPP) will be implemented and Best Management Practices (BMP's) will be installed including installation of a floating containment boom along the shoreline bank of the Lower Duwamish Waterway to contain floating debris and turbidity that may enter the water column.

3. A demolition sizing and staging area will then be established for processing demolition debris and a load out area will be constructed to remove debris from the site.

4. The existing chain link fencing along the shoreline will be removedby PPM. The chain link will be rolled into manageable sections not greater than 30" in diameter for disposal. Fence posts will be removed using the 270 Hitachi excavator with bucket and thumb. The fence posts will be stockpiled for offsite disposal.

5. Timber pilings will be pulled from the waterside with the 1200 Hitachi excavator. The pilings will be placed on the sediment barge; any water generated from the pilings will be treated by the on-water water treatment system. The pilings will be sized and broke by the 1200 Hitachi excavator to facilitate disposal. The pilings will be removed from the sediment barge at the transload facility by the PC1000 Hitachi excavator and loaded directly into truck and trailers for disposal. Piles that break during pulling or piles that cannot be reached with the excavator will be cutoff 3-feet below finished grade (top of final subgrade) as required by the Contract Specifications.

6. To the extent possible all demo material will be removed from the waterside with the 1200 Hitachi excavator. The material would be put on the material barge and transloaded into truck and trailers for disposal. If material cannot be reached the 450 Hitachi excavator with bucket and thumb will be used to remove debris from the shoreline. Slag or large concrete that cannot be lifted from bank with the 450 Hitachi shall be sized in place prior to removal utilizing the 270 Hitachi with a 10,000-pound hydraulic hammer attachment. After sizing, the 270 Hitachi will bring the materials to the top of the bank for loading. All bank debris will be loaded into a 40ton articulated haul truck for placement on the debris sizing and load out pad area located in the stockpiling area

identified in Figure 1.

7. Culvert pipe to be removed and plugged will be pulled back to the top of final excavation subgrade using personnel on the ground and the 450 excavator with bucket and thumb attachment. PPM will take measures to minimize the potential for releases. The types of measures will be dependent on the nature of the culvert. If possible, the culvert can be removed in entirety and loaded intact into the 40ton offroad truck's box.After removing the extent of culvert required by the Contract Specifications, PPM labor will plug the culvert with a cement grout.
8. If large debris is removed, leaving a void in the ground surface that will be eventually excavated during bank soil removal, construct Upland Backfill material in successive horizontal layers not exceeding 12 inches in loose thickness. Compact each layer to 85 percent of the modified proctor maximum dry density. When backfilling beneath or within the 1:1 influence zone of existing foundations that support active structures (the Shop Building and liquid cooling towers), PPM shall match the level of the surrounding ground or final grades and compact to at least 95 percent of the modified proctor maximum dry density (ASTM International [ASTM] D 1557-78).

5.0 Protection of the Environment

Spill controls will be implemented to ensure cement used during grouting does not enter the Lower Duwamish Waterway. These could include spreading plastic along bank, using a spill containment tray below grout points, capping the end of the grout line after one grout location is completed, and other measures to be determined in the field. Any grout spilled in the waterway shall be addressed in accordance with the Spill Prevention, Controls, and Countermeasures Plan.

PPM will install a containment boom along the shoreline, encompassing the project demolition removal area. The containment boom will be constructed using a 50-foot by 6-foot silt curtain sections. The containment boom is constructed as shown in Figure 2. Each section will overlap and be secured together using rope. Once the containment boom is assembled, it will be floated into the river and spread out to along the entire shoreline of the removal action area where demolition activities will occur. The containment boom will be placed far enough out to still float during low tide events and not get damaged by any demolition debris should it fall into the water. The containment boom will be secured in place using ecology blocks with buoys at locations along the containment boom.

Removed materials that have come in contact with contaminated soils will be sized in the stockpile area. The stockpile area will be built with layer impermeable PVC liner, crushed rock, and ecology blocks. Ecology blocks will be placed around the three sides of the stockpile area. A PVC liner will be placed over the blocks and down onto the footprint of the stockpile area. As necessary, additional subgrade will be placed below the liner and graded to facilitate gravity drainage of water (water that passively leaves the materials in the stockpile area or rainfall) that comes into contact with the overlying liner. Permeable crushed rock will then be placed on top of the liner as a protective layer and a

berm will be formed against the ecology blocks. The installed liner will be graded to a slope so as water passively leaves the soil it will flow to the enclosed section of the stockpile area for a 4" pump to remove the water and process it through the water treatment system as defined in the Water Treatment Plan, Appendix G of the RAWP.

6.0 Material Identification

DESCRIPTION	ANTICIPATED QUANTITIES	WEIGHT	MAXIMUM SIZE ACCEPTED BY FACILITY	DISPOSAL TYPE
Wooden piles	780 linear feet (LF)	80tons	10'X4'outer diameter (OD)	Offsite Disposal
Chain link Fence	550 LF	1ton	20'X5'OD	Offsite Disposal or Recycling, if deemed acceptable by Engineer
Concrete/ Asphalt Slag	Unknown	90tons	10'X10'X10' CANNOT BE HEAVIER THAN 12TONS PER PIECE	Offsite Disposal or Recycling, if deemed acceptable by Engineer
Miscellaneous Debris/Logs	Unknown	20tons	10'X4'OD	Offsite Disposal/Landfilling
Culvert Pipe	70 LF	18tons	10'X5'OD	Offsite Disposal or Recycling, if deemed acceptable by Engineer

Figure 1- Stockpile Area

N

ACCESS GATE

TEMPORARY SECURITY KIOSK / ENGINEER'S OFFICE

SCAFFOLD SET-UP AND TRUCK LINING INSTALLATION

STAGING/ STOCKPILING AREA

ACCESS GATE

20' WIDE TEMPORARY ACCESS ROUTE

ADMIN BLDG

EAST MARGINAL WAY

MAIN GATE

SECURITY KIOSK

STOCKPILING AREA

WATER TREATMENT SYSTEM

LOWER DUWAMISH WATERWAY

0 25' 50' 100' 150'

1" = 50'-0"

LEGEND:

- NAVIGATION CHANNEL
- JORGENSEN PROPERTY LINE
- EXISTING RAILROAD TIES
- CONTAINMENT BARRIER (DO NOT DISTURB)
- TEMPORARY SECURITY FENCE
- TEMPORARY ACCESS ROUTES

CONSTRUCTION SIGNS

1. CAUTION PEDESTRIAN TRAFFIC
2. 15MPH SPEED LIMIT
3. CAUTION TRUCK TRAFFIC
4. STOP SIGN

NO.	ISSUE/DESCRIPTION	BY	DATE

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JORGENSEN FORGE EARLY ACTION AREA
DUWAMISH WATERWAY
SEATTLE, WASHINGTON

TRAFFIC CONTROL PLAN VIEW

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PROJ MGR: JC	REVIEWED BY: JC	CHECKED BY: JC	FIGURE 2
DESIGNED BY: JC	DRAWN BY: JC	SCALE: AS NOTED	
DATE: 03/14/2014	PROJECT NO.	REVISION NO. 0	SHEET NO. 1 OF 1

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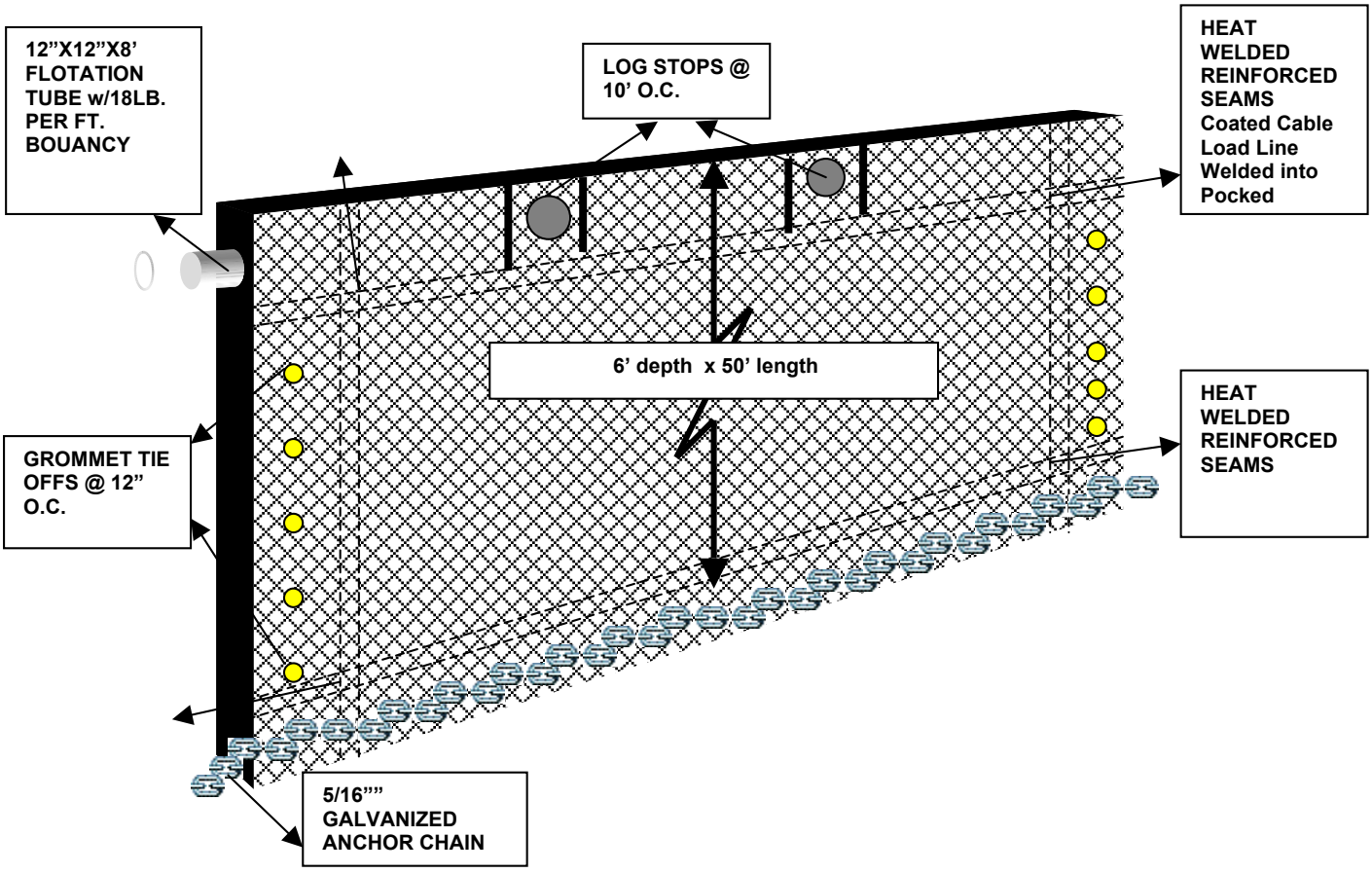
Figure 2- Containment Boom


12”X12”X8’ FLOTATION TUBE w/18LB. PER FT. BOUANCY
LOG STOPS @ 10’ O.C.
HEAT WELDED REINFORCED SEAMS Coated Cable Load Line Welded into Pocked
6’ depth x 50’ length
GROMMET TIE OFFS @ 12” O.C.
HEAT WELDED REINFORCED SEAMS
5/16”” GALVANIZED ANCHOR CHAIN